

United States Government

Department of Energy

memorandum

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06.21.93

NJ.11

DATE: JUL 28 1986

REPLY TO
ATTN OF: NE-23SUBJECT: Commercial Facilities Used by National Lead Company of Ohio in Support
of FMPC OperationsTO: Robert E. Lynch
Procurement and Contracts
Division, AD-42
Oak Ridge Operations Office

The Division of Facility and Site Decommissioning Projects (DFSD) is responsible for managing the Department's Formerly Utilized Sites Remedial Action Program (FUSRAP). The purposes of FUSRAP are (1) to identify facilities formerly operated for or by the Manhattan Engineer District (MED) and Atomic Energy Commission (AEC) which may have been radioactively contaminated as a result of these operations, (2) to determine if the facilities require remedial action, and (3) where DOE has authority, to conduct the remedial action. Authority for remedial action under FUSRAP is derived from the Atomic Energy Act of 1954, as amended, and in some specific cases from congressional direction. The program is limited to only those sites that have been released from DOE control and for which no other DOE program or office has authority.

As part of this program, DFSD has identified 83 subcontractors and vendors that did work involving the processing or handling of radioactive material for the National Lead Company of Ohio (NLO) in support of the DOE Feed Materials Production Center (FMPC) located near Fernald, Ohio. NLO is a DOE prime contractor. The subcontracts and purchase orders referred to above were entered into under authority provided in NLO's contract with the AEC. The original AEC contract is now identified as DOE Contract No. AC05-76OR01156. It is my understanding that this contract is now terminated but has not been closed out.

When an active contract exists under which radiological characterization and any required remedial action can be accomplished, it is the Department's policy to conduct the necessary actions under that contract. In this regard, I am forwarding the attached material for your consideration and initiation of appropriate action to determine the need for and to conduct remedial action, if such is required to comply with the current radiological standards.

The initial information concerning NLO subcontractors and vendors that did work involving radioactive materials in support of the FMPC was provided by NLO in a letter dated October 12, 1976 (Enclosure 1). Subsequent record searches were conducted to identify additional sites that might have been used and to obtain the information necessary to determine the potential for residual radioactive contamination that might still be present on the properties where work under these subcontracts and purchase orders was carried out.

The findings derived from these record searches support our belief that there is a potential for contamination at several of the sites and that, with the few exceptions discussed below, there is liability under terms of the contract for action necessary to insure compliance with current radiological standards. In general, the findings that are the principal cause for concern are:

- a. Widespread use of commercial subcontractor and vendor facilities by NLO to perform work involving the processing or handling of radioactive material was verified. In many instances, the work was performed by NLO personnel using subcontractor/vendor facilities and equipment.
- b. Although an extensive health and safety program is indicated, very little radiological data is available to assess the potential for residual radioactive contamination that might exceed today's standards.
- c. Some of the radiological data that is available and information obtained from former AEC and NLO personnel indicate that, even though sites were decontaminated at the completion of operations, residual contamination would probably exceed current standards, particularly at those sites that performed extensive metal fabrication work with uranium and thorium metals.

A summary of major findings from records assembled to date is provided in Attachment 2.

Information on 65 of the 83 subcontractors and vendors referred to above is provided in Attachments 3 and 4. The remaining 18 were also AEC prime contractors considered under FUSRAP or were licensed by the AEC, thus under the jurisdiction of the Nuclear Regulatory Commission.

Attachment 3 provides a summary of the information assembled to date on 53 of the 65 subcontractors and vendors identified therein. Attachment 4 contains information on the 12 remaining sites identified in the NLO letter, Attachment 1, for which no additional information has been found relative to support of FMPC operations.

As indicated above, I am referring these formerly utilized sites for your consideration and appropriate action under the contract with the National Lead Company of Ohio in accordance with current Departmental policy. The documentation from which the information provided herewith was obtained will be made available upon request.

If you require additional assistance or would like to discuss the possibility of accomplishing the necessary radiological characterization and cleanup under FUSRAP, please contact me at FTS 233-4716.

NE-23
DeLaney

7/25/86

Edward G. DeLaney, Director
Division of Facility and Site
Decommissioning Projects
Office of Nuclear Energy

4 Attachments

cc:
Office of Defense Waste and
Transportation Management, DP-12
R. Berube, EH-24
D. Monti, EH-23

bcc:
Aerospace

NE-20 RF
NE-23 RF
DeLaney RF
NEG (4)

NE-23:EDeLaney:ph:353-4716:7/25/86:IBM:204/71:3.2.3.2

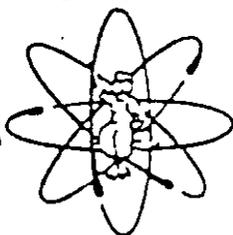
CONTRACT # AT(50-1)-1156

ENCLOSURE 1

NATIONAL LEAD COMPANY OF OHIO

A SUBSIDIARY OF NL INDUSTRIES, INC.

P. O. BOX 39158



CINCINNATI, OHIO 45239

PHONE: AREA CODE: 513-738-1151

OCT 12 1976

5844

Mr. H. D. Fletcher, Director
Uranium Enrichment Operations Division
Oak Ridge Operations Office
U. S. Energy Research & Development Adm.
P. O. Box 39158
Oak Ridge, Tennessee 37830

Dear Mr. Fletcher:

ERDA SURVEY PROGRAM

Ref.: Letter, Fletcher to Audia, 9/27/76, same subject

Per your request, we have reviewed our contract files, in addition to other sources, for the names of companies who have performed work at our request. It does not include material shipped from here on a production order from the AEC or ERDA.

Identification as to type of agreement and type of work is listed. The dates are only guidelines and may not include every time material was processed.

Very small test samples (such as contaminated MgF₂) were sent out for possible sale to various companies. They are also excluded.

If you desire other information, please let us know.

Sincerely,

S. F. Audia
Manager

CEP/rhg

Attachment

cc: W. J. Adams C. E. Polson
 H. D. Fletcher
 W. J. Grannen Central Files
 L. M. Levy
 R. C. Heatherton

7100

✓ *given already done by DOE*

PROCESSORS OF RADIOACTIVE MATERIALS - WORK REQUESTED BY NLO

<u>COMPANY NAME AT TIME OF REQUEST</u>	<u>LOCATION</u>	<u>APPROX. DATE</u>	<u>CODE</u>
✓ Allegheny-Ludlum Steel Corp. (4)	Watervliet, N. Y.	3/52	PM ✓
American Machine & Foundry (4)	<u>Brooklyn, N. Y.</u>	10/52, 7/53,	TM ✓
Landis Machine Tool Co. (2)	Waynesboro, Pa.	9/52	TM ✓
Bethlehem Steel Corp. (Lackawanna) (4)	Buffalo, N. Y.	2/52	PM ✓
Besley - Wells (2)	S. Beloit, Wisc.	5/53	TM ✓
Dorr Corp. (Door Oliver) (2)	Westpoint, Conn.	1/55	TO ✓
Oregon Bureau of Mines (3) <i>is the same as U.S.</i>	Albany, Oregon	10/54 - 6/55	PM ✓
Superior Steel Co. (2)	<u>Carnegie, Pa.</u>	12/55-1/57	PM
Atlas Steels, Ltd., (2)	Welland, Ont.	2/57, 11/57	TM ✓
Armour Research Foundation (1)	Chicago, Ill.	9/57	TO ✓
Albacraft Laboratories (1)	Oxford, Ohio	3/57	PM ✓
Chambersburg Engr. Co. (2)	Chambersburg, Pa.	3/57	TM ✓ O/F
Knoxville Iron Co. (1), (2)	Knoxville, Ky.	10/57 - 10/58	* ✓
Podbeilniac Corp. (2)	Chicago, Ill.	2/57	TC ✓
Associated Aircraft Tool & Mfg. Co. (1)	Hamilton, Ohio	2/56 - 3/57	PM ✓
Magnus Metals (1)	Cincinnati, Ohio	12/57, 3/58	TM ✓
✓ Simonds Saw & Steel Co. (1)	Lockport, N. Y.	7/52 - 7/57	PM ✓
✓ Watertown Arsenal (3)	Watertown, Mass.	11/57	TM ✓
✓ Vitro Rare Metals Co. (1)	<u>Cannonsburg, Pa.</u>	8/54-8/56	PO
Ohio State University (1)	Columbus, Ohio	12/56, 5/59	TOC ✓
Tube Reducing Corp. (2)	Wallington, N.J.	1/58	TM ✓
American Bearing Corp. (1)	Indianapolis, Ind.	7/58	TM ✓
Ajax-Magnethermic Corp. (2)	Youngstown, Ohio	10/58, 11/61	TM ✓
✓ Westinghouse Electric (2)	<u>Bloomfield, N. J.</u>	5/58, 6/59	TM
Oregon Metallurgical Corp. (1)	Albany, Oregon	11/58	PM ✓

<u>COMPANY NAME AT TIME OF REQUEST</u>	<u>LOCATION</u>	<u>APPROX. DATE</u>	<u>CODE</u>
U. S. Steel, Nat'l Tube Div. (2)	McKeesport, Pa.	4/59, 2/60	TM ✓ 0
Sutton, Steele and Steele (2)	Dallas, Texas	11/59	TM ✓
North Carolina State College (1)	Chapel Hill, N. C.	1958 <i>4/59</i>	TO ✓ <i>5/59</i>
Hunter Douglas Plt. of Bridgeport Brass (2)	Riverside, Calif.	8/59	TM ✓ 0
Bridgeport Brass Co. (4)	Adrian, Mich.	2/59	PM ✓
Petrolite Corp. (2)	St. Louis, Mo.	9/59	TOC ✓ <i>0/59</i>
Heald Machine Co. (2)	Worcester, Mass.	3/60, 5/60	TM ✓
Dubois Chem. (2)	Cincinnati, Ohio	5/60	TM ✓
Pioneer Division, Bendix Aviation (2)	Davenport, Iowa	6/60; 9/60	TC ✓
American Machine & Metals, Inc. (2)	E. Moline, Ill.	5/60	TO ✓
Stauffer Metals, Inc. (2)	Richmond, Calif.	4/61	TM ✓
Ithaca Gun Co. (2)	Ithaca, N. Y.	9/60, 8/61 11/61	TM ✓ 0
A.W. LeBlond Mach. Tool Co. (2)	Cincinnati, Ohio	11/61	TM ✓ 0
American Mfg. of Texas (2)	Ft. Worth, Tex.	7/61, 8/61, 8/62; 4/63	TM ✓ 0
Leason Works (2)	Rochester, N. Y.	10/61	TM ✓
Good Machinery & Chem. Corp. (2)	Nitro, W. Va.	1962	TOC ✓
Ever Corp. (2)	Battlecreek, Mich.	4/62	TO ✓ 0
Attelle Memorial Inst. (4)	Columbus, <u>Ohio</u>	12/62	TM
National Lead Co., Nuclear Division (2)	Albany, N.Y.	7/62	TM
University of Florida (1)	Gainesville, Fla.	10/63 - 11/69	TM ✓ <i>0/63</i>
Cincinnati Milling Machine (2)	Cincinnati, OHIO	10/63	TM ✓
England Lime Co. (2)	Canaan, Conn.	6/63	TOC ✓
I. Hayes, Inc. (2)	Cranston, R. I.	1/64	TM ✓
Charles Taylor & Sons (2) <i>Inc. S.S.I.C.</i>	Cincinnati, Ohio	8/64, 1/65	TO ✓ <i>0/64</i>

<u>COMPANY NAME AT TIME OF REQUEST</u>	<u>LOCATION</u>	<u>APPROX. DATE</u>	<u>CODE</u>
Southern Research Institute (1)	Birmingham, Ala.	12/64, 9/65	TM ✓ <i>SK</i>
University of Denver Research Institute (1)	Denver, Colo.	2/65	TM ✓ <i>SP</i>
New England Materials Lab., Inc. (2) (also called Teledyne Mat. Res.)	Medford, Mass.	1/65; 4/67	TM ✓ <i>SP</i>
Tocco Heat Treating Co. (2)	Cleveland, Ohio	4/67; 2/68	TM ✓
Fenwal, Inc. (2)	Ashland, Mass.	5/67; 11/67	TC ✓
Robbins & Myers Co. (2)	Springfield, Ohio	1975	TOC ✓ <i>SP</i>

CODE: P = PRODUCTION QUANTITIES
T = TEST QUANTITIES
C = CONTAMINATED MATERIAL (TBP, MgF₂, SLUDGE)
M = RADIOACTIVE METAL
O = OTHER THAN METAL (RADIOACTIVE) (UF₄, ThO₂)
* = CONTAMINATED SCRAP IRON
(1) = Sub-Contract
(2) = Purchase Order
(3) = Interagency Agreement
(4) = Prime AEC Contract

day. An NLO trip report indicates that equipment and facilities used were decontaminated.

46. Titanium Alloy Mfg. Company
Division of National Lead Co.
Niagara Falls, NY

July 1956 - Reduced ores and other uranium compounds by arc melting and induction furnace. Analytical data sheet reflecting the results of air monitoring on 10 and 11 July 1956 are the only documents found on this operation. These documents reflect minimal potential for contamination. NOTE: Titanium Alloys was an AEC prime contractor and one of the early major source of zirconium metal and compounds. In October 1955 Titanium Alloy was issued AEC Source Material License No. C-3415 to do experimental work relative to conversion of thorium scrap to anhydrous tetrachloride. The only documents found concerning the operation are analytical data sheets reflecting the results of air monitoring during operations on 10 and 11 July. These data indicate minimal potential for contamination. This firm also performed work for Union Carbide, Oak Ridge Operations prime contractor.

47. Titanium Metals Corp. of America
Division of National Lead Co.
Henderson, NV

1959 - Prepared a feasibility study and fabricated and operated equipment to develop a process for electrolyzing magnesium fluoride (approximately 5% uranium content). Period of work believed to be approximately 6 months. NLO Purchase Order No. 95902 is the only document pertaining to this work that has been found.

48. Tocco Induction Heating Div.
Ohio Crankshaft Company
(Park Ohio Industries)
Cleveland, OH

March 1966-August 1968. Conducted acceptance testing for induction treating furnace systems in February and June 1968. Purchase Order No. W-57180 was for three of the systems for installation at the FMPC. Tests included the heat treating of normal and depleted uranium slugs. Provisions of the purchase order included a release indemnifying NLO and the Government against any claims arising from work performed under the purchase order. Analytical data sheets reflecting the results of air monitoring of the operations during the two periods referenced indicate minimum potential for residual contamination. The purchase order was written with Ohio Crankshaft Co. Delivery of the equipment was apparently by Park-Ohio Industries.

49. Tube Reducing Corporation
Wallington, NJ

9 January 1952 - Conducted test using the "Rockrite Process" to reduce the diameter of two 6 foot uranium metal rods.

December 1957 - Reduced uranium tubes. Analytical data sheets reflecting the results of air monitoring during the period 17-19 December are the only documents found concerning this operation. The data indicate considerable potential for contamination.

50. Utica Drop Forge & Tool Co.
Utica Metals Division
Utica, NY

An NLO trip report dated 12 September 1955 indicates that these facilities were evaluated for potential work in response to a letter proposal. No indication was found that would indicate the company actually did work for AEC.

51. Vulcan Tool Company
Address Unknown

October 1959 - Conducted experiments involving the cutting of normal uranium slugs and tubes on a Brehm tub cutter. Quantity of material handled and period of the test are unknown.

52. Wash-Rite Company
Indianapolis, IN

December 1953 - Washed/cleaned work gloves to decontaminate. Lint from solvent contained uranium, as expected. Analytical data sheets reflecting the results of analyses for uranium (measurements taken during three days of operations) are the only documents found.

January 1964-December 1965 - Period of Purchase Order No. 37R-68916-F for approximately 140,000 pairs of leather work gloves. No indication of requirement for cleaning under this purchase order has been found.